

Supplementary Materials: Seeing Text in the Dark: Algorithm and Benchmark

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1 ABLATION STUDY ON THE NUMBER OF TEXT COMPONENT

Table 1 suggests that a deficient number of text components in the TSR adversely affects the holistic representation of text. An increase in text components leads to a reduction in the inference speed of our method. Nonetheless, the F1-scores stabilize and do not show further improvement beyond a threshold of 60 components for both datasets. Hence, we select 60 as the optimal number of text components, ensuring adequate representation without compromising inference speed.

Table 1: Explorations of the number of text component

Component	LAtED				CTW1500			
	FPS	P(%)	R(%)	F1(%)	FPS	P(%)	R(%)	F1(%)
N=40	10.4	81.7	54.0	65.0	10.6	85.5	82.8	84.1
N=50	10.2	82.1	55.0	65.9	10.4	86.0	83.1	84.5
N=60	9.9	82.8	55.4	66.4	10.0	86.2	83.5	84.8
N=70	9.8	82.8	55.4	66.4	9.8	86.2	83.5	84.8
N=80	9.5	82.8	55.4	66.4	9.6	86.2	83.5	84.8

2 MORE VISUAL EXAMPLES

For more comparison against enhancement-based methods. Please check Figure 1, Figure 2 and Figure 3. For detection results on normal light dataset. Please check Figure 4.

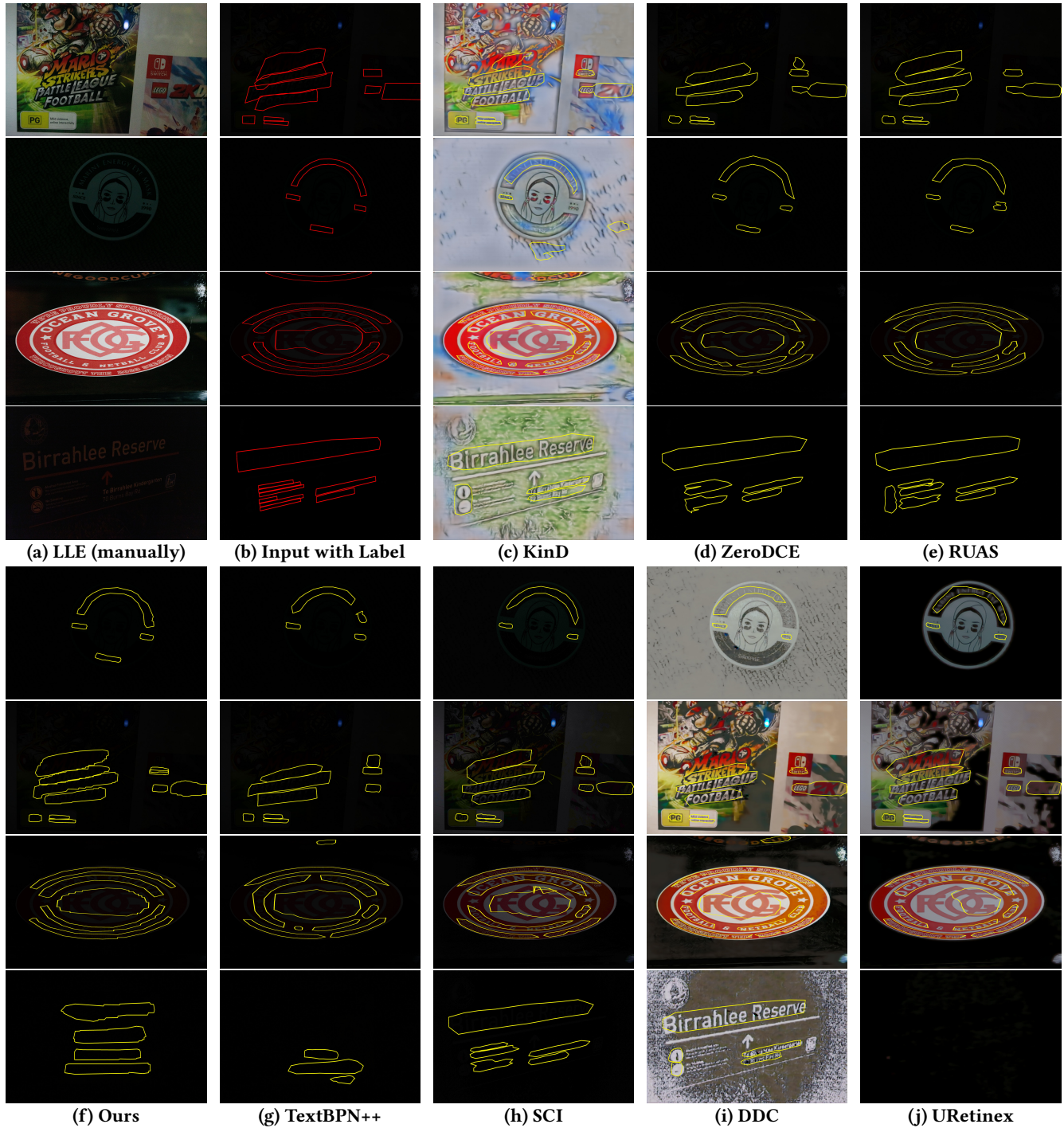


Figure 1: More Comparison against enhancement-based methods (Part 1). (a) Manually enhanced image. (b) Input low-light image with label(c)-(e) and (h)-(j). Fine-tuned results of low-light enhancement methods with TextBPN++. (g) Fully Supervised TextBPN++. (f) Our method.



Figure 2: More Comparison against enhancement-based methods (Part 2). (a) Manually enhanced image. (b) Input low-light image with label(c)-(e) and (h)-(j). Fine-tuned results of low-light enhancement methods with TextBPN++. (g) Fully Supervised TextBPN++. (f) Our method.

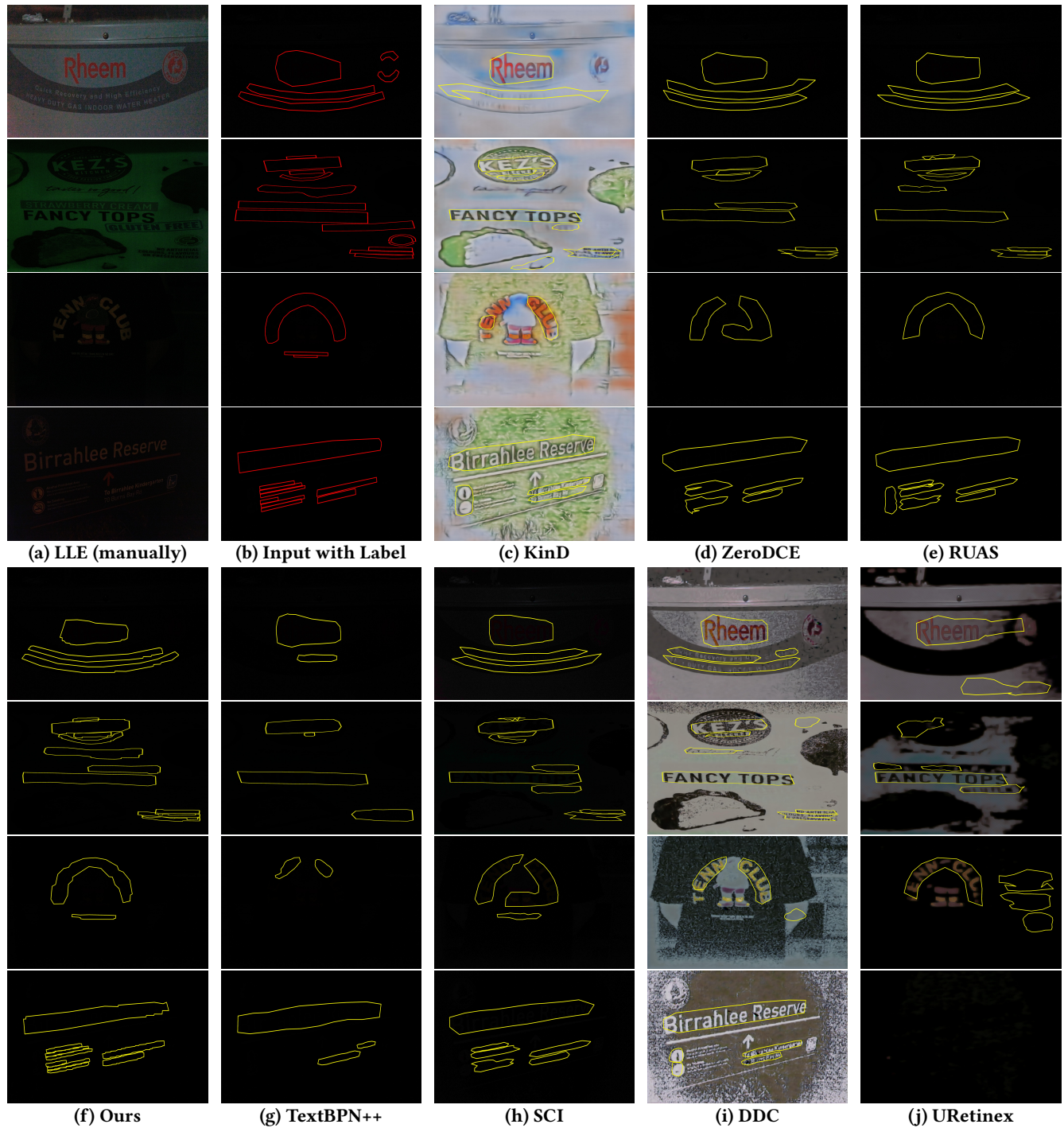


Figure 3: More Comparison against enhancement-based methods (Part 3). (a) Manually enhanced image. (b) Input low-light image with label(c)-(e) and (h)-(j). Fine-tuned results of low-light enhancement methods with TextBPN++. (g) Fully Supervised TextBPN++. (f) Our method.

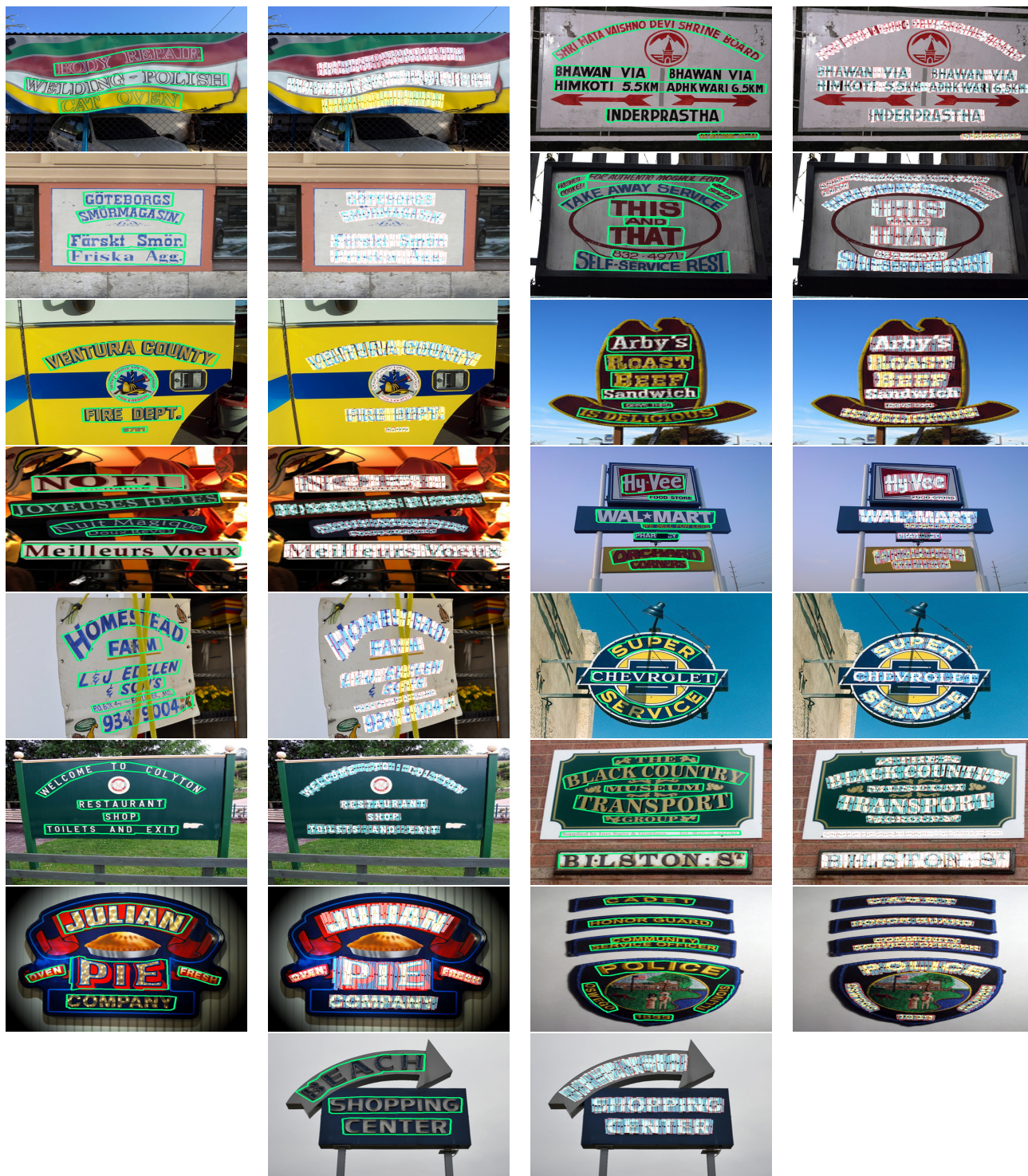


Figure 4: Some of text detection results and rectangular text shaping on normal light datasets.